

REMARKS

The present application relates to inbred maize plant and seed PH3RC. Claims 1-34 are pending in the present application. Claims 2, 23-26, 29-32 and 34 have been amended. Claim 18 has been canceled. No new matter has been added by way of amendment. Applicant respectfully requests consideration of the claims in view of the following remarks.

Detailed Action

Applicant has amended the specification to include the U.S. Patent No. of the parent application on page 1, lines 9-12 as requested by the Examiner. No new matter has been added.

Applicant acknowledges that a proper Application Data Sheet is being submitted herein as requested by the Examiner.

Applicant further acknowledges that a proper form 1449 Information Disclosure Statement (IDS) is being submitted herein as requested by the Examiner.

Double Patenting

The Examiner rejects claims 1-6, and 13-33 under the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-31 of copending U.S. Patent No. 6,747,196. The Examiner states that although the conflicting claims are not identical, they are not patentably distinct from each other. *See* Office Action, pp. 3-6.

Applicant is herein submitting a Terminal Disclaimer in compliance with 37 C.F.R. § 1.321(c), which disclaims any term of a patent issuing from this application which would extend beyond the term of copending U.S. Patent No. 6,747,196.

Therefore, Applicant submits that the claims are in proper form for allowance and respectfully request reconsideration and withdrawal of the nonstatutory obviousness-type double patenting rejections.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 24, 26, 33, and 34 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. *See* Office Action, pp. 6-7.

Claim 24 is indefinite according to the Examiner for "the article 'a' in the recitation, 'the single locus was stably inserted into a maize genome by transformation'". Although not acceding to the Examiner's rejection, in an effort to reduce the issues on appeal, Applicant has now amended claim 24 to replace the article "a" with the article "the", thus alleviating this rejection.

The Examiner states that claim 26 is indefinite in the recitation "yield enhancement", "improved nutritional quality" and "male sterility and male fertility". Applicant respectfully traverses. "Yield Advantage" is defined on page 19 of the specification as "the yield advantage of variety #1 over variety #2". Therefore yield enhancement would be the improvement of the trait yield over another variety. Applicant asserts that genes which increase yield by increasing the plants resistance to disease, herbicides, or insects are within the scope of the claims as presented. The specification teaches multiple ways of introgressing or transforming a maize plant with various genes which confer advantageous traits desired in the plant. *See* specification, pp. 27-41. The specification also teaches many transgenes that could be inserted into the plant of claim 13. *See* specification, pp. 35-41. In addition, see U.S. Patent No. 5,936,145, issued August 10, 1999, which is prior to the filing date of the instant application. Claim 39 reads as follows: "[t]he single gene conversion of the corn plant of claim 29, where the gene confers enhanced yield stability." Thus, a single gene that confers enhanced yield stability was known in the art prior to the filing date of the instant application. One of skill in the art would recognize that it is common to transform a maize plant with various genes in order to confer desired traits to the maize plant.

In addition, Applicant asserts the terms "male sterility" and "male fertility" are also taught in the specification. *See* specification pp. 2-3, 31, and 41. Similarly, "improved nutritional quality" would represent an improvement in the nutritional quality versus another variety as described on pages 30-31 of the specification. Further, single genes that affect nutritional quality are known in the art. Specifically genes for modified fatty acids, decreased phytate content and modified carbohydrate compositions which are disclosed in the specification on pp. 40-41. Applicant respectfully submits that one skilled in the art would thus recognize that claim 26 is adequately defined.

Claim 33 is indefinite according to the Examiner "as the preamble of the claim indicates that the method is for developing a maize plant breeding program using plant breeding techniques...the claim does not indicate when the maize plant is developed". Applicant traverses

this rejection. Applicant has obtained allowance from the Supervisory Patent Examiner, Anne Marie Grunberg, regarding claim 33 as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Moreover, Applicant is aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claim 33, was in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Applicant respectfully requests this rejection be alleviated in light of the above statements.

Claim 34 is indefinite according to the Examiner for "the recitation, 'the molecular marker profile'" because "there is insufficient antecedent basis for the recitation in the claim". Although not acceding to the Examiner's rejection, in an effort to reduce the issues on appeal, Applicant has now amended claim 34 to replace the article "the" with the article "a", thus alleviating this rejection. Further, Applicant has obtained allowance from the Supervisory Patent Examiner, Anne Marie Grunberg, regarding claim 34 as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Moreover, Applicant is aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claim 34, was in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Applicant respectfully requests this rejection be alleviated in light of the above statements.

In light of the above amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

Rejections Under 35 U.S.C. § 112, First Paragraph

A. Written description regarding Claim 18

Claim 18 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner states "the claim is broadly drawn towards any maize seed produced by growing a hybrid maize plant, wherein the hybrid maize plant was produced by crossing a

maize plant having all the morphological and physiological characteristics of maize plant PH3RC with a second maize plant". *See* Office Action, pp. 7-8.

Although not acceding to the Examiner's rejection, in an effort to expedite prosecution and reduce the issues upon appeal, Applicant has now canceled claim 18, thereby alleviating this rejection.

B. Written description regarding Claims 7-10

Claims 7-10 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claims(s) contains subject matter, which was not described in the specification in such a way as reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. *See* Office Action, p. 8.

The Examiner states that claim 7 is "drawn towards an F1 hybrid maize seed comprising an inbred maize plant cell of inbred maize line PH3RC...there is no written description support for such a seed, or plant produced therefrom, in the specification".

Applicant traverses this rejection. Applicant asserts there is adequate written description in the specification for "an inbred maize plant cell" on page 31 of the specification:

As used herein, the term plant includes plant cells, plant protoplasts, plant cell tissue cultures from which maize plants can be regenerated, plant calli, plant clumps, and plant cells that are intact in plants or parts of plants, such as embryos, pollen, ovules, seeds, flowers, kernels, ears, cobs, leaves, husks, stalks, roots, root tips, anthers, silk and the like. Specification, p. 31.

Applicant asserts that the use of this terminology would be well understood to one ordinarily skilled in the art and is not new matter. Furthermore, Applicant has obtained allowance from the Supervisory Patent Examiner, Anne Marie Grunberg, as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Moreover, Applicant is aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claim 7, were in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Applicant respectfully requests this rejection be alleviated in light of the above statements.

One skilled in the art would thus recognize that Applicant has fully described and fully satisfied the legal standards of written description for claims 7-10 as of the filing date of the application. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the written description rejections under 35 U.S.C. §112, first paragraph.

C. Enablement regarding Claims 7-10

Claims 7-10 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. *See* Office Action, p. 9.

The Examiner states that claim 7 is not enabled. Applicant traverses this rejection. Applicant asserts that claim 7 is adequately described and further enabled as evidenced by the statements described *supra*. Further, Applicant is aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claim 7, was in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Furthermore, Applicant has obtained allowance from the Supervisory Patent Examiner, Anne Marie Grunberg, as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases.

Applicant further asserts that dependent claims 8-10 are also adequately described and enabled. The Examiner does not provide explanation as to why these claims are not enabled. Nevertheless, Applicant maintains the arguments described *supra* also apply to dependent claims 8-10. Moreover, Applicant is aware that in view of a meeting with the Group Director in July 2006, the Examiner's were informed that the present claim set, including claims 8-10, was in proper form and would be allowable as has been evidenced in analogous allowed and issued Pioneer Hi-Bred Int'l, Inc. inbred continuation cases. Applicant respectfully requests this rejection be alleviated in light of the above statements.

Accordingly, Applicant submits that claims 7-10 are fully enabled and have fully satisfied the legal standards for enablement. Applicant respectfully requests reconsideration and withdrawal of the enablement rejections under 35 U.S.C. § 112, first paragraph.

Rejections Under 35 U.S.C. §§ 102(b)/103(a)

Claim 18 is rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Johnson (U.S. Patent No. 5,859,355). The

Examiner states that "seed may have been produced from a method different from those of the instantly claimed seed. However the instantly claimed products do not appear to differ from the products taught by the reference". *See* Office Action, p. 10.

Although not acceding to the Examiner's rejection, in an effort to expedite prosecution, claim 18 has been canceled, thus alleviating this rejection. Applicant respectfully requests the Examiner withdraw the rejections to claim 18 under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) as obvious over Johnson (U.S. Patent No. 5,859,355).

Request for Information under 37 C.F.R. § 1.105

The Examiner has made a Request for Information under 37 C.F.R. § 1.105. The Examiner states the requested information is "required to make a meaningful and complete search of the prior art". *See* Office Action— Request for Information Under 37 C.F.R. § 1.105, pp. 12-14.

Applicant provides answers to each of the Examiner's interrogatories discussed *infra*.

The Examiner begins by asking firstly, what were the original parental maize lines used to produce maize inbred line PH3RC? Please supply information pertaining to the lineage of the original parental lines back to any publicly available varieties. PHHB4 and PHFT4. Information pertaining to the lineage of the original parental lines is available within the PVP Application No. 200200257, attached as Appendix 1.

Secondly, what method and steps were used to produce maize inbred line PH3RC? Pedigree selection method produced by selfing and selection for 11 generations.

Third, have any of said parental maize lines or progeny therefrom been disclosed or made publicly available?

a. The parental maize line PHHB4 was previously disclosed or made publicly available in PVP Certificate No. 9400093 and U.S. Patent Nos. 5,444,178 and 5,633,427. The parental maize line PHFT4 has not been previously publicly disclosed or made publicly available.

b. No other progeny of the parental cross PHHB4/PHFT4 was previously publicly disclosed or made publicly available by Applicant prior to the earliest priority date.

Fourth, were any other maize lines produced by said method using said original parental maize lines, and if so, have said produced maize lines been publicly available or sold? If so, under what designation/denomination and under what conditions were said other maize lines

disclosed or made publicly available? No other maize line using the same F1 cross has been produced by said method using said original parental maize lines at or before the time of filing of the instant application.

In light of the above remarks, Applicant respectfully requests reconsideration and compliance with the interrogatories under the Request for Information under 37 C.F.R. § 1.105.

Conclusion

In conclusion, Applicant submits in light of the above amendments and remarks, the claims as amended are in a condition for allowance, and reconsideration is respectfully requested. If it is felt that it would aid in prosecution, the Examiner is invited to contact the undersigned at the number indicated to discuss any outstanding issues.

Please consider this a one month extension of time from January 2, 2007 to February 2, 2007, under the provision of 37 C.F.R. § 1.136(a) and charge Deposit Account No. 26-0084 for the amount of \$120.00. No other fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any fees inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



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